

# PTS645 Series 6 mm Tact Switches



## Features/Benefits

- Compact size 6 x 6 mm
- Variety of actuator lengths
- Choice of actuation force
- RoHS compliant and compatible

## Typical Applications

- Consumer products
- Instrumentation
- Computer products
- Industrial

Tactile Switches

B

## Specification

FUNCTION: Momentary action  
CONTACT ARRANGEMENT: SPST, N.O.  
TERMINALS: PC pins

## Mechanical

ACTUATION FORCE: 130 grams, 160 grams, 200 grams, 260 grams  
LIFE EXPECTANCY: 100,000 operations.

## Electrical

CONTACT RATING: 50 mA @ 12 V DC.  
DIELECTRIC STRENGTH: 250 V AC min.  
CONTACT RESISTANCE: 100 mΩ max. initial.  
INSULATION RESISTANCE: 10<sup>11</sup> Ω min.

## Environmental

OPERATING TEMPERATURE:  
- Thru-hole and SMT with J actuator shape: -20°C to 70°C  
- SMT (except for J actuator shape): -20°C to 85°C

## Process

SOLDERING: Preheating to 100°C for 45 sec. max. Keep flux flush with top surface of PCB; do not apply to component side of PCB and area where terminals are located. Soldering to 255°C for 5 sec. max. Clean by brushing on solder surface. Do not clean switch with solvents.

## Packaging

Bulk packaging.

### Tape & reel for the SMT type:

Reels of 1,000 pieces for 4.3 and 5.0 mm height  
Reels of 700 pieces for 7.0 mm height  
Reels of 700 pieces for 7.3 mm height  
Reels of 500 pieces for 9.5 mm height  
Reels of 400 pieces for 13.0 mm height

**NOTE:** Specifications listed above are for switches with standard options.  
For information on specific and custom switches, consult Customer Service Center.

## How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



### Termination

- S** Straight
- T** Straight with ESD pin
- V** Vertical

### Actuator Shape

- NONE** Round actuator, All versions
- J** Square actuator, 2.4 mm side (available for Straight 7.3 mm and Vertical 6.15 mm)

### Actuation Force

- L** 130 grams
- M** 160 grams
- H** 200 grams
- K** 260 grams

### Insertion Type

- 2** Thru hole
- SMTR92\*** Surface mount G-type, tape & reel
- JSMTR92\*** Surface mount J-type, tape & reel

RoHS compliant and compatible.  
Silver plated.

### Switch height from PCB for S and T only (H dimension see actuator height drawings)

- 43** 4.3 (.169), thru-hole and SMT
- 50** 5.0 (.197), thru-hole and SMT
- 70** 7.0 (.275), thru-hole and SMT
- 73** 7.3 (.287), thru-hole and SMT, square actuator 2.4 mm side only
- 95** 9.5 (.374), thru-hole and SMT
- 13** 13.0 (.512) SMT only

### Switch length from front leads for V only (H dimension see actuator height drawings)

- 31** 3.15 (.124), vertical
- 39** 3.85 (.151), vertical
- 58** 5.85 (.230), vertical
- 61** 6.15 (.242), vertical, square actuator 2.4 mm side only
- 83** 8.35 (.329), vertical

\*Only the straight type termination without ESD pin is available in SMT type.

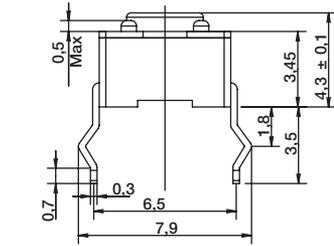


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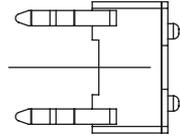
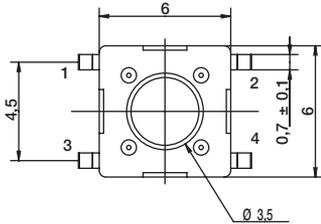
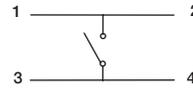
Dimensions are shown: mm  
Specifications and dimensions subject to change

## TERMINATION

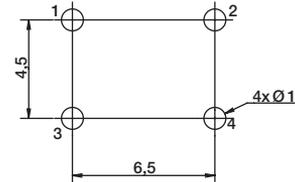
### S STRAIGHT



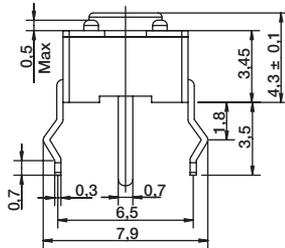
SCHEMATIC



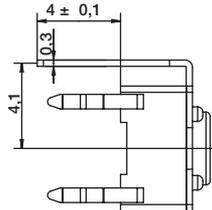
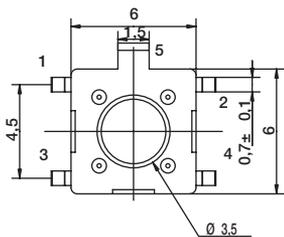
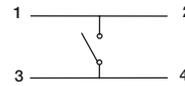
PCB LAYOUT



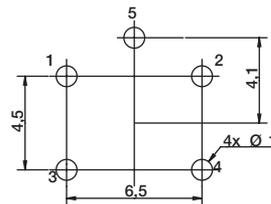
### T STRAIGHT WITH ESD PIN



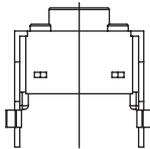
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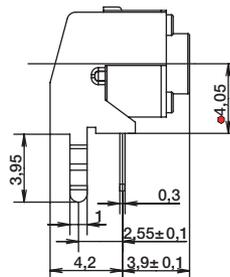
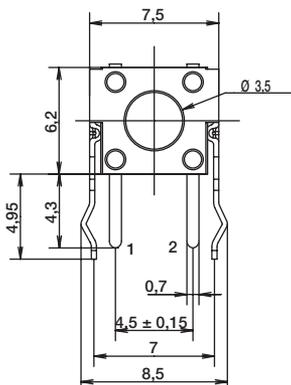
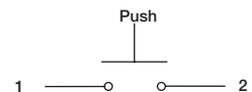
PCB LAYOUT



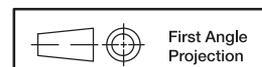
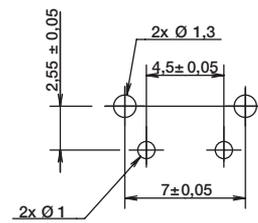
### V VERTICAL



SCHEMATIC



PCB LAYOUT

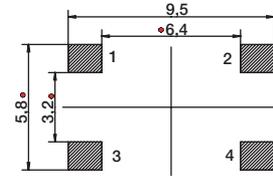
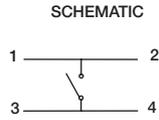
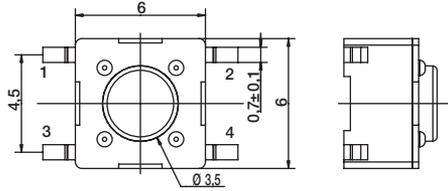
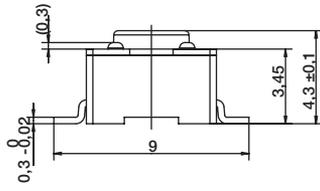


First Angle  
Projection

# PTS645 Series 6 mm Tact Switches

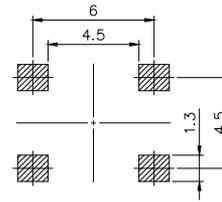
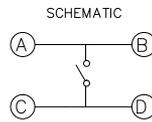
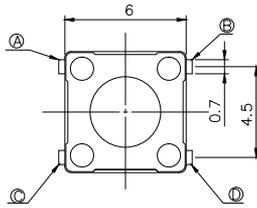
## TERMINATION

### SMT G Type

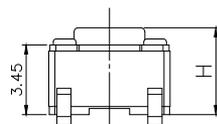
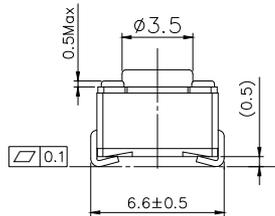


PCB LAYOUT

### SMT J Type



PCB LAYOUT



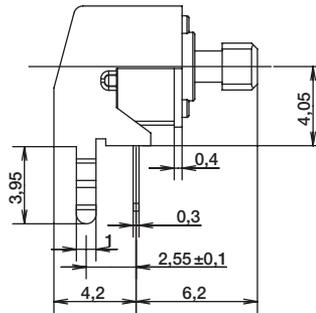
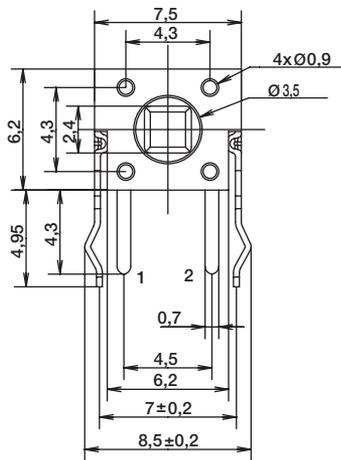
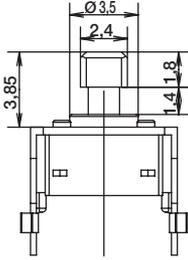
First Angle  
Projection



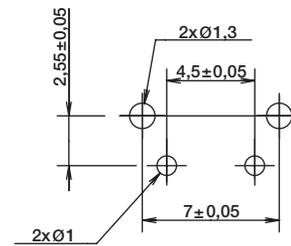
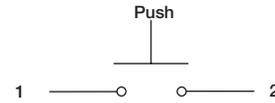
## ACTUATOR SHAPE

### J SQUARE ACTUATOR

VERTICAL THT - FOR 6.15MM LENGTH ONLY

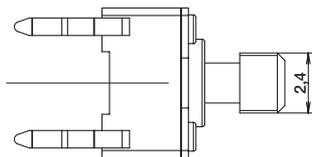
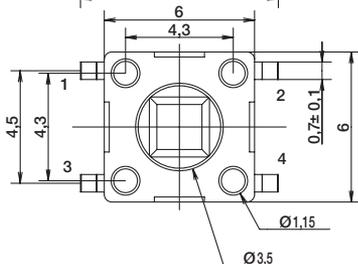
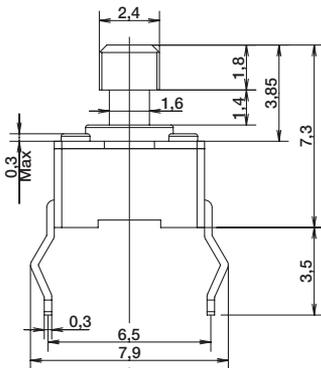


SCHEMATIC

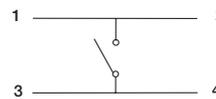


RECOMMENDED PCB LAYOUT

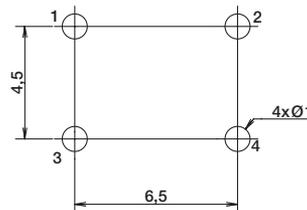
VERTICAL THT - FOR 7.3MM HEIGHT ONLY



SCHEMATIC



RECOMMENDED PCB LAYOUT

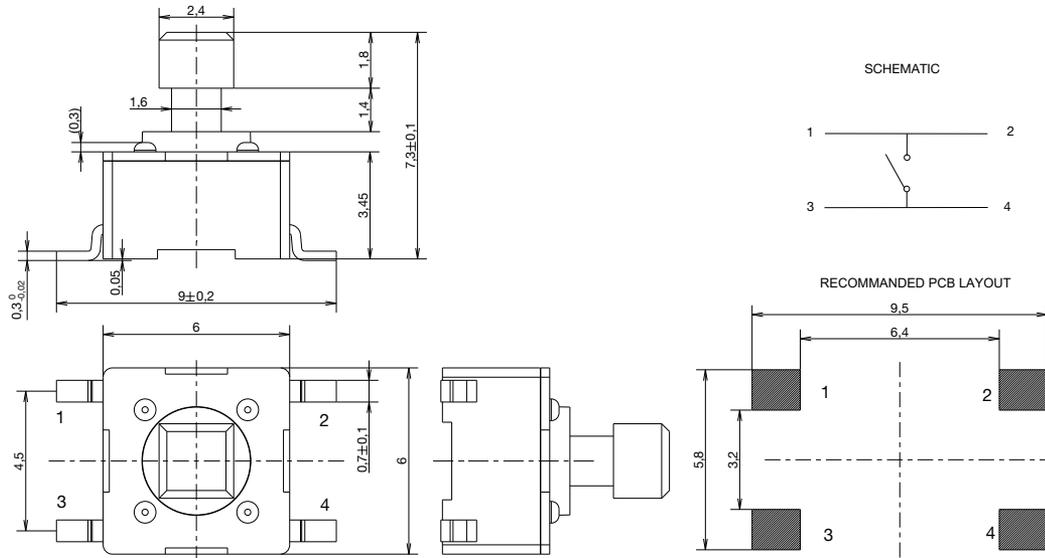


First Angle  
Projection

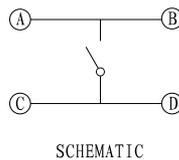
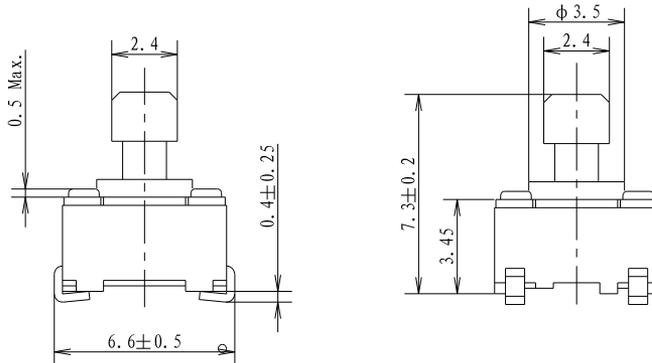
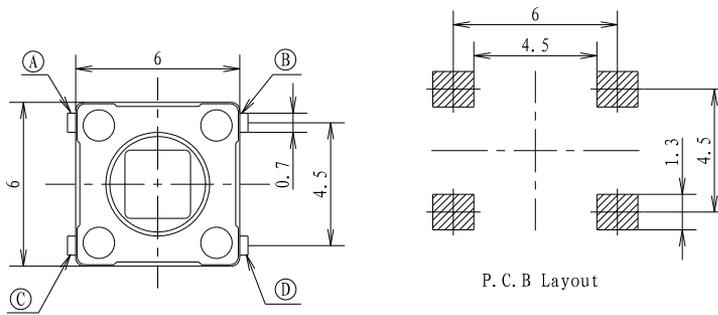
# PTS645 Series 6 mm Tact Switches

## ACTUATOR SHAPE

### STRAIGHT SMT G TYPE - FOR 7.3MM HEIGHT ONLY



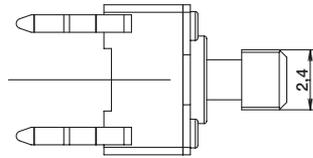
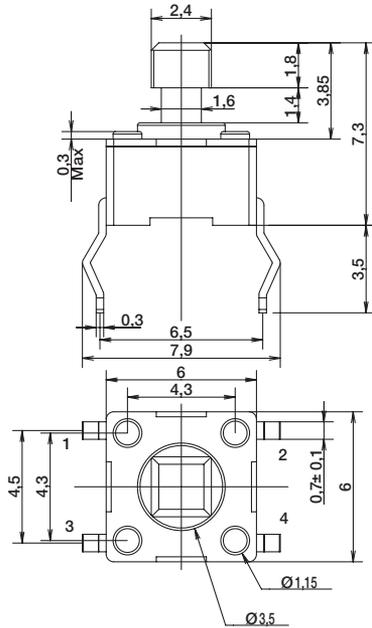
### STRAIGHT SMT J TYPE - FOR 7.3MM HEIGHT ONLY



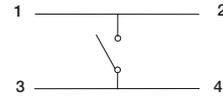
Dimensions are shown: mm  
Specifications and dimensions subject to change

## ACTUATOR SHAPE

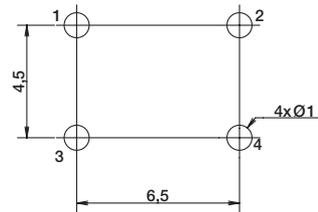
### VERTICAL THT - FOR 7.3MM HEIGHT ONLY



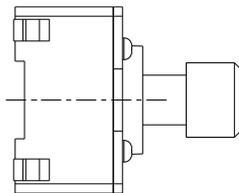
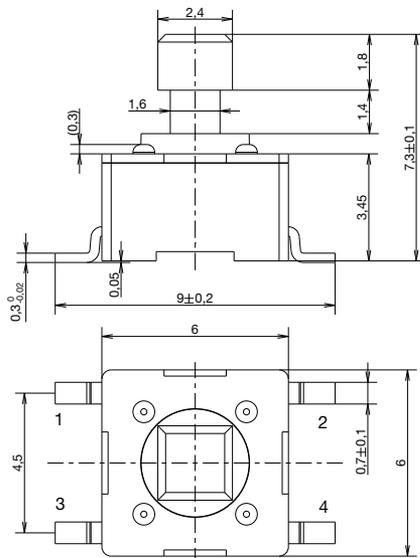
SCHEMATIC



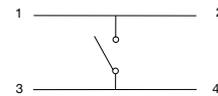
RECOMMENDED PCB LAYOUT



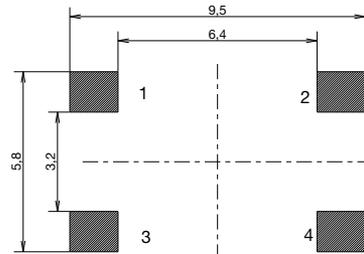
### STRAIGHT SMT - FOR 7.3MM HEIGHT ONLY



SCHEMATIC



RECOMMENDED PCB LAYOUT



First Angle  
Projection

# PTS645 Series 6 mm Tact Switches

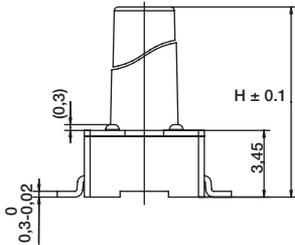
## ACTUATION FORCE

OPTION CODE	FORCE
<b>L</b>	130 grams Black
<b>M</b>	160 grams Blue
<b>H</b>	200 grams Gray
<b>K</b>	260 grams Red

Tactile Switches

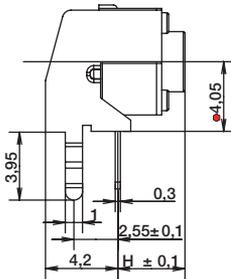
## ACTUATOR HEIGHT

Switch height from PCB for S and T only



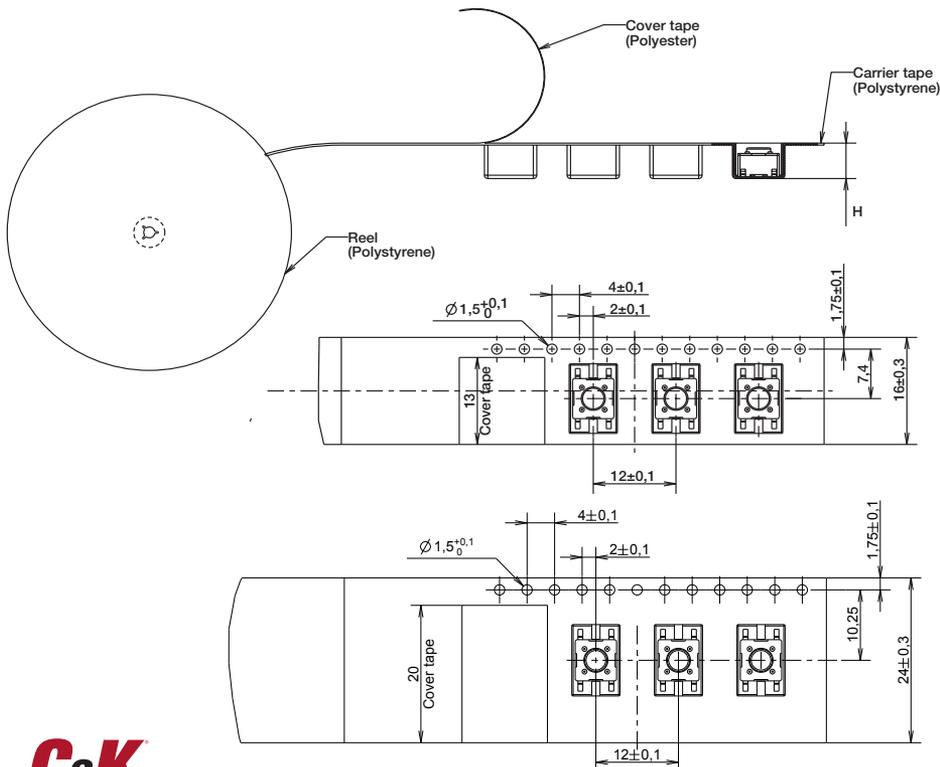
OPTION CODE	DIMENSION H	TERMINATION	SCHEMATIC	
			Without EMC pin	With EMC pin
<b>43</b>	4,3 (.169)	Thru-hole and SMT		
<b>50</b>	5,0 (.197)	Thru-hole and SMT		
<b>70</b>	7,0 (.275)	Thru-hole and SMT		
<b>95</b>	9,5 (.374)	Thru-hole and SMT		
<b>13</b>	13,0 (.512)	SMT		

Switch length from front leads for V only



OPTION CODE	DIMENSION H	TERMINATION	SCHEMATIC	
			Without EMC pin	With EMC pin
<b>31</b>	3,15 (.124)	Vertical		
<b>39</b>	3,85 (.151)	Vertical		
<b>58</b>	5,85 (.230)	Vertical		
<b>83</b>	8,35 (.329)	Vertical		

## TAPE & REEL FOR SMT G TYPE VERSIONS



OPTION CODE	WIDTH TAPE	POCKET HEIGHT
<b>43</b>	16 ± 0.3	5.3
<b>50</b>	16 ± 0.3	5.3
<b>70</b>	16 ± 0.3	7.3
<b>73</b>	16 ± 0.3	7.6
<b>95</b>	24 ± 0.3	10.3
<b>13</b>	24 ± 0.3	13.3



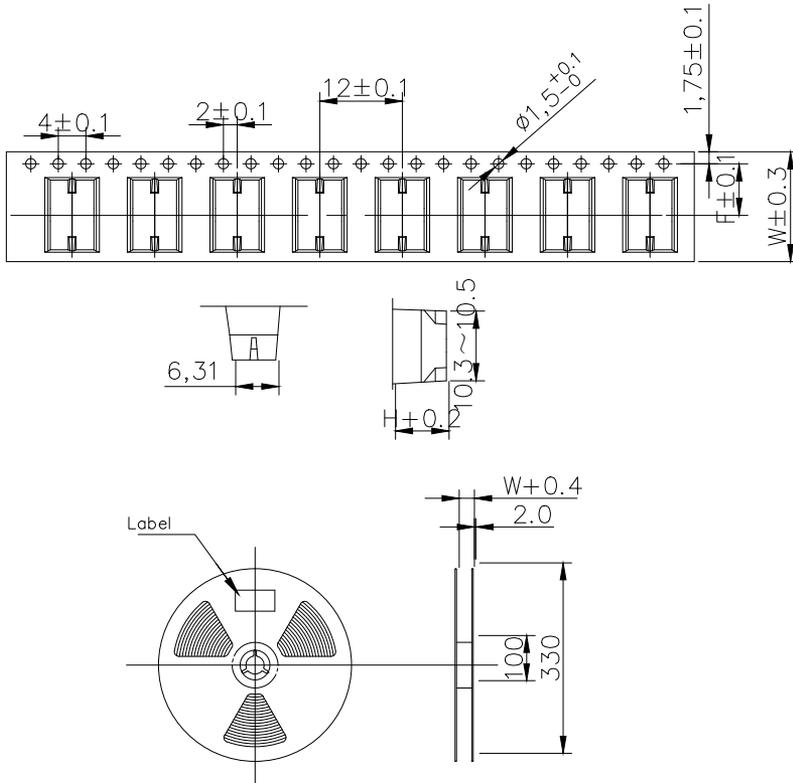
First Angle Projection

Dimensions are shown: mm  
Specifications and dimensions subject to change



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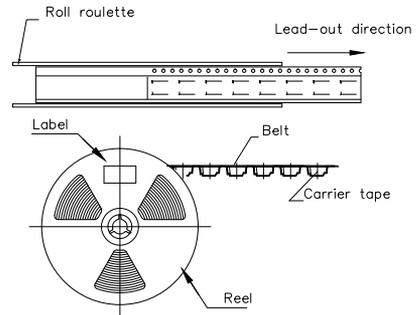
# TAPE & REEL FOR SMT J TYPE VERSIONS



## Tape specifications

Product height (H)mm	Carrier tape width (W)mm	Center distance of carrier tape (F)mm	pcs/reel
4.3	16	7.5	1000
5.0	16	7.5	1000
7.0	16	7.5	700
7.3	16	7.5	700
9.5	24	11.5	500
11	24	11.5	500
13	24	11.5	500

Note: The disc rotates counterclockwise. According to the packing shown in the figure, the braid must not be twisted to prevent product deformation;



Tactile Switches